WHAT IS CLAIMED IS:

1. An exposure method comprising the steps of:

    acquiring information of an alignment mark
formed on an object to be exposed, by changing a value
of a device parameter, the information being used for
an alignment between a reticle and the object, the
reticle forming a circuit pattern to be transferred to
the object, and the value being able to be set in an
exposure apparatus;

    determining the value of the device parameter
of the exposure apparatus based on the information
acquired in said acquiring step; and

    transferring the pattern onto the object
using the exposure apparatus that sets the value of the
device parameter, which has been determined.

2. An exposure method according to claim 1,
wherein the alignment mark formed on the object
includes plural elements arranged at a predetermined
interval,

    wherein the information of the alignment mark
includes the interval between the plural elements.

3. An exposure method according to claim 2,
wherein said determining step determines the value of
the device parameter so that reproducibility of the

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interval between the elements in the alignment mark may
improve.

4.   An exposure method according to claim 2,
wherein said determining step determines the value of
the device parameter so that a deviation from an
average of plural intervals among the elements in the
alignment mark acquired by said acquiring step may
reduce.

5.   An exposure method according to claim 2,
wherein said determining step determines the value of
the device parameter so that the intervals among the
elements in the alignment mark acquired by said
acquiring step may approach a predetermined interval.

6.   An exposure method according to claim 1,
wherein said determining step is repeated to acquire
plural determined values of the device parameter, and
said transferring step uses an average of the plural
determined values of the device parameter.

7.   An exposure method according to claim 1,
wherein the device parameter includes one or more
parameters for manipulating the exposure apparatus.

8.   An exposure method according to claim 1, wherein the device parameter includes an arrangement of sample shots used for a global alignment.

5   9.   An exposure method according to claim 1, wherein the device parameter includes an illumination mode for illuminating the alignment mark.

         10.   An exposure method according to claim 1,

10   wherein the alignment mark formed on the object includes plural elements arranged at a predetermined interval,

         wherein the device parameter includes a mark width as a length of the element in an alignment

15   measurement direction.

         11.   An exposure method according to claim 1, wherein the alignment mark formed on the object includes plural elements arranged at a predetermined

20   interval,

         wherein the device parameter includes a mark line width as a width of a contour of the element.

         12.   An exposure method according to claim 1,

25   wherein the device parameter includes a process parameter used to process a detection signal of the alignment mark.

13. An exposure method according to claim 12, wherein the device parameter is a width of a process window.

5   14. An exposure method according to claim 12, wherein the device parameter is a center distance of a process window.

15. A program that enables a computer to execute
10 an exposure method that includes the steps of:

acquiring information of an alignment mark formed on an object to be exposed, by changing a value of a device parameter, the information being used for an alignment between a reticle and the object, the
15 reticle forming a circuit pattern to be transferred to the object, and the value being able to be set in an exposure apparatus;

determining the value of the device parameter of the exposure apparatus based on the information
20 acquired in said acquiring step; and

transferring the pattern onto the object using the exposure apparatus that sets the value of the device parameter, which has been optimized.

25 16. An exposure apparatus for transferring a pattern formed on a reticle onto an object to be exposed, said exposure apparatus comprising:

an information acquisition part for acquiring information of an alignment mark formed on an object to be exposed, by changing the value of the device parameter, the information being used for an alignment

5   between the reticle and the object; and

an optimization part for setting the value of the device parameter to said exposure apparatus based on the information acquired.

10   17.   A device fabrication method comprising the step of:

exposing an object using an exposure method; and

performing a development process for the

15   object exposed,

wherein the exposure method includes the steps of:

acquiring information of an alignment mark formed on an object to be exposed, by changing a value

20   of a device parameter, the information being used for an alignment between a reticle and the object, the reticle forming a circuit pattern to be transferred to the object, and the value being able to be set in an exposure apparatus;

25   determining the value of the device parameter of the exposure apparatus based on the information acquired in said acquiring step; and

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transferring the pattern onto the object using the exposure apparatus that sets the value of the device parameter, which has been determined.